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August 10, 1951

Dear Josh,

This latter you may be able to read - but my typing is as bad as my handwriting.

News of the CSH meetings trickled in. Unfortunately I arrived in New York on Saturday - just after the meetings. The various happenings were overshadowed by the broadside fired at "crowitz about the OGOE hypothesis, at least in the minds of the Callech people, so I have heard little of the rest of the meetings. Incidentally, you are being blamed for the "Award" which Horotitz got - next time remove the labels "Photographed at the Agricultural College, Univ. of Wisconsin". This might have been a slick trick on the part of BD tho:
What I did hear related to Salmonella, DeLamater's conjugation tubes on blood agar, and Rothfals linkage analysis.

Concerning the succinate KL2 business, which I don't understand either, thanks for the invitation but I'll have to turn it down:

W1177 X succ- by SRP selection gives | 1390 succ-(W1177 is succ-)

chi square succ-sm = $2 \cdot 10^4$

Crosses of Wii77 X succ-hist- and succ-meth- show the same close sm. Nal. Xyl linkage.

Factors aren't always linked in the same way in different auxotrophic crosses. I don't believe all this negative intereference business - part of the results are explicable by non-random isolation of progeny. For instance, V-Lac linkage from various crosses:

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All the above have been derived from more than 700 isolations. Incidentally - for the streak test for sm, succ, EMB (try home-made Endo for At mannitol, NG for arabinose), phage I use 60 streaks per plate - from a master isolation plate:

Everything works well - including retesting, retention of new combinations on master plate, book-keeping (if EMB plates are read early - otherwise - decolorize +).

I can't use only sm selection and analysis for the amino acid markers à la Rothfals because of the succ marker - amino acids in the medium, even small amounts, louse up the results.

As for lineage of K 12 succ- - it may not mean much. Y24, Y161, 58-161, and 679-680 and derivatives are all succ+ (at least no succ- come up in intercrosses and serial reversions are succ+). Ryan's parent K 12 is succ-, from this I obtained a succ+ once and only once, produced a hist-phenylala- from it for crossing, and tested a lot of succ-auxotrophs. These latter fall into two categories - those that give only succ- on intercrossing and those that give succ+ as well (UGHI!!). Ellen Kahn's 175-12 is succ- but throws off succ+ on crossing by a succ- that throws off succ+. I an trying to get some linkage data on these anomalous succ-'s but it's slow going and I don't have much time left.

nice - puly

News from here:

- 1) lamda still being worked on different plaque sizes, different sensitivities of sensitive cultures as a function of media etc. Peg Lieb is doing this andhopes to see Esther at the Minneapolis meetings.
- 2) multiplicity reactivation has been "reinterpreted" by
 Dulbecco fine analysis shows that data does not follow
 log survivors vs dose curve extrapolates too low at
 zero dose and has too shallow a slope at high dose
- 3) Benzer has shown T7 works OK for UV analysis of intracellular phage growth (repttition of Luria and Laterjet) but that T2 is anomalous as LL found.
- 4) Vogt has been watching KI2 under the phase contrast thousands of L granules form 0 agglutinate or clump,
 if clumps are large enuf tetrads form and bacteria grow
 out of them and swim away. It is difficult to understand
 what she thinks but in general and with no claim to be

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accurate - K12 cells produce granules which can multiply themselves and coalesce, if enuf do so bacteria can grow out of them, granules of a single bacterium do not recombine with themselves tho' they may fuse in clumps, meiosis is all wet, what happens is a random incorporation of factors in resultant regenerated bacteria. That was yesterday, today may be different. She wanders around chortling that this fixes Nelzzenz' idea. Oh yes, agar is necessary as a substratum.

I may be in for the Minneapolis meetings. It looks as if I'll be working for an industrial company next year - my Public Health fellowship won't be decided until on or about Sept. 15th (supposed to have been ditto June 15th) and I'm due to leave here Sept. 30th. What do you know about Vanderbilt - supposedly some people just left there and they are looking for more.

Reprints of the kinetics article follow.

Sincerely.

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